

DO NOT OPEN THE SEAL UNTIL YOU ARE TOLD TO DO SO

QP-FSL-2024

Question Booklet No.

**GENERAL STUDIES
PAPER—I**Test Booklet
Series

Time Allowed : 1 Hour

Maximum Marks : 100

INSTRUCTIONS FOR CANDIDATES

1. Immediately after the commencement of the examination, you should check that this Test Booklet **does not** have any unprinted or torn or missing pages or questions etc. If so, get it replaced by a complete Test Booklet.
2. Write your Roll Number on the Test Booklet in the Box provided alongside.
3. This Test Booklet contains **100** questions. Each question comprises of four responses (answers) within as (A), (B), (C) and (D). You should select the response which you feel is the most **correct** and mark it on the OMR Answer Sheet.
4. You have to mark all your responses **ONLY** on the separate **OMR Answer Sheet** provided. Also read the directions in the **OMR Answer Sheet**. Fill in all the entries in the OMR Answer Sheet **correctly**. **DO NOT WRITE/MARK ANYTHING EXCEPT IN THE SPACE PROVIDED FOR IT**, failing which your OMR Answer Sheet **shall not** be evaluated.
5. **Count** the number of **questions attempted** carefully and write it down in the space provided **in the OMR Answer Sheet**.
6. After you have completed filling in all your responses on the **OMR Answer Sheet** and the examination has concluded, **you should hand over** to the Invigilator **only the OMR Answer Sheet (in original)**. **You are permitted to take away 2nd Copy of the OMR Answer Sheet and Test Booklet**.
7. Each question carries 1 mark.
8. Candidature would be cancelled in case of non-compliance with any of these instructions.
9. **Penalty for wrong answers :**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, 0.5 mark of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be no penalty for that question.
10. **“Mobile phones, calculators, IT gadgets, smart watch and any other electronic devices such as Bluetooth etc. are not allowed inside the premises where the examination is being conducted. Any infringements of these instructions shall entail disciplinary action including ban from future examinations.”**

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1. Select the right article for the blank :

_____ oranges of Nagpur are very famous.

- (A) A
- (B) An
- (C) The
- (D) None of the above

2. Select the right article for the blank :

He was in _____ hurry when I saw him.

- (A) a
- (B) an
- (C) the
- (D) None of the above

3. Fill in the blank with suitable preposition :

He deals _____ everyone in a very polite way.

- (A) in
- (B) with
- (C) for
- (D) about

4. Fill in the blank with **correct** tense of the verb given :

As Poonam _____ the road, a bus _____ her down.

- (A) is crossed, is knocking
- (B) was crossing, was knocking
- (C) was crossing, knocked
- (D) crossed, knocks

5. Select the option which expresses the given sentence in passive voice :
People believed that witches communicated with the devil.

- (A) The witches communicated with the devil is being believed.
- (B) It was believed that witches has communicated with the devil.
- (C) It was believed that witches communicated with the devil.
- (D) That witches communicated with the devil has been widely believed.

6. Select the option which expresses the given sentence in indirect speech :

Fillip says to his mother, "I have immense respect for you".

- (A) Fillip tells his mother that he has immense respect for him.
- (B) Fillip tells his mother that he has immense respect for her.
- (C) Fillip tells his mother that he had immense respect for her.
- (D) Fillip tells his mother that he has respect her.

7. Choose the most appropriate one to fill in the blank :

Problems _____ if the parent's approach to discipline is inconsistent.

- (A) arise
- (B) has arise
- (C) has arises
- (D) have arises

8. Change the following sentence to an affirmative sentence :

No other metal is as expensive as gold.

(A) No other metal except gold is expensive.

(B) Gold is expensive of all the metals.

(C) Isn't gold the most expensive of all metals?

(D) Gold is the most expensive of all metals.

9. Determine the part of the sentence containing an error. The error, if any, will be in only one part of the sentence :

Each of them / has to understand /
(A) (B)

their responsibility. / No error
(C) (D)

10. Fill in the blank with the most suitable word from the given options :

Ten miles _____ a long distance.

(A) are

(B) is

(C) were

(D) quite

11. IIT Delhi has opened its first international campus in which of the following countries?

(A) UAE

(B) Australia

(C) Brazil

(D) Malaysia

12. The Prime Minister of India recently gifted which traditional painting to Russian President during BRICS Summit in Kazan?

(A) Pattachitra painting

(B) Madhubani painting

(C) Sohrai painting

(D) Warli painting

13. Which of the following ministries organized the 'International WASH Conference, 2024'?

(A) Ministry of Agriculture

(B) Ministry of Environment, Forest & Climate Change

(C) Ministry of Jal Shakti

(D) Ministry of New and Renewable Energy

14. The DRDO and the Indian Army have successfully test fired indigenously built Man Portable Anti-Tank Guided Missile (MPATGM) in which region?

(A) Porbandar, Gujarat

(B) Pokhran, Rajasthan

(C) Visakhapatnam, Andhra Pradesh

(D) Nagapattinam, Tamil Nadu

- 15.** Who became the first woman helicopter pilot in the Indian Navy?
 (A) Mohana Singh
 (B) Anamika B Rajeev
 (C) Priya Paul
 (D) Archana Kapoor
- 16.** How many medals were won by India at the 2024 Paris Paralympics?
 (A) 15
 (B) 20
 (C) 25
 (D) 29
- 17.** When was 2019 edition of Manipur Sangai Festival organized?
 (A) From 14th to 23rd November, 2019
 (B) From 20th to 30th November, 2019
 (C) From 24th to 30th November, 2019
 (D) From 1st to 14th November, 2019
- 18.** Which of the following is a Manipuri version of hockey?
 (A) Hiyang Tannaba
 (B) Khong Lakpi
 (C) Yubi Lakpi
 (D) Khong Kangjei
- 19.** Who has been conferred with Fiji's highest civilian award 'Companion of the Order of Fiji'?
 (A) Droupadi Murmu
 (B) Narendra Modi
 (C) S. Jaishankar
 (D) Amit Shah
- 20.** Which of the following countries has sent two trains carrying coal to India through the International North-South Transport Corridor (INSTC) for the first time?
 (A) Russia
 (B) China
 (C) Ukraine
 (D) Bangladesh
- 21.** Sound is a
 (A) transverse mechanical wave
 (B) longitudinal mechanical wave
 (C) transverse non-mechanical wave
 (D) longitudinal non-mechanical wave
- 22.** Which of the following is a vector quantity?
 (A) Energy
 (B) Momentum
 (C) Moment of inertia
 (D) All of the above
- 23.** Which of the following is the SI unit of luminous intensity?
 (A) Lambert
 (B) Joule
 (C) Candela
 (D) Ampere

24. Which of the following formulae is **correct** for universal gas constant?

(A) $R = \frac{PV}{nT}$

(B) $R = \frac{V}{PT}$

(C) $R = \frac{nT}{PV}$

(D) $R = \frac{PV}{n^2T}$

25. The disintegration process of heavy nucleus into two or more lighter nuclei is called

(A) nuclear fusion

(B) nuclear fission

(C) radioactive disintegration

(D) mass loss

26. The law of floatation was invented by

(A) Newton

(B) Wright Brothers

(C) L. E. Waterman

(D) Archimedes

27. In rectilinear motion, the objects move along a

(A) straight line

(B) circle

(C) parabola

(D) hyperbola

28. Which of the following is **not** a metallic mineral?

(A) Zinc

(B) Bauxite

(C) Mica

(D) Nickel

29. Lenz's law represents

(A) relation between current and mechanical force

(B) relation between magnetic force and magnetic field

(C) relation between e.m.f. and rate of change of flux

(D) relation between displacement and Newton's force

30. Which of the following organs in human body produces albumin, one of the major components of blood serum?

(A) Liver

(B) Pancreas

(C) Spleen

(D) Brain

31. What is the relation between time period (T) and angular frequency (ω) of a wave?

(A) $T = \frac{2\pi}{\omega}$

(B) $T = 2\pi\omega$

(C) $T = \frac{\pi}{2\omega}$

(D) $T = \omega$

32. Which among the following is a colourless gas?

- (A) Sulphur
- (B) Phosphorus
- (C) Chlorine
- (D) Oxygen

33. The unit of nervous tissue is

- (A) cell
- (B) nephron
- (C) neuron
- (D) blood

34. If a man starts from home to his office, travels at a speed of 5 m/s and returns home with the same speed, then what is his total velocity?

- (A) 5 m/s
- (B) 20 m/s
- (C) 0 m/s
- (D) 0.5 m/s

35. Oxygen and ozone are

- (A) allotropes
- (B) isotopes
- (C) isomers
- (D) isobars

36. The chemical formula of carbolic acid is

- (A) H_2CO_3
- (B) $\text{C}_6\text{H}_5\text{COOH}$
- (C) $\text{C}_6\text{H}_5\text{OH}$
- (D) $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$

37. A semiconductor has

- (A) negative temperature coefficient
- (B) positive temperature coefficient
- (C) Both (A) and (B)
- (D) None of the above

38. A 220 V, 100 W bulb is connected to a 110 V source. Calculate the power consumed by the bulb.

- (A) 25 W
- (B) 15 W
- (C) 10 W
- (D) 20 W

39. How much work is done in moving a charge of 5C across two points having a potential difference of 16 V?

- (A) 65 J
- (B) 45 J
- (C) 40 J
- (D) 80 J

40. Name the device used to measure wind speed.

- (A) Barometer
- (B) Anemometer
- (C) Manometer
- (D) Thermometer

41. Which of the following forces moves an aircraft through the air?

- (A) Thrust force
- (B) Lift force
- (C) Gravitational force
- (D) Lift and drag force

42. Which of the following is called 'Pearl Ash'?

- (A) Na_2CO_3
- (B) NaHCO_3
- (C) K_2CO_3
- (D) CaCO_3

43. Ribosomes are the sites for

- (A) protein synthesis
- (B) photosynthesis
- (C) fat synthesis
- (D) respiration

44. The mass-energy relation is the conclusion of

- (A) quantum theory
- (B) aerial theory of energy
- (C) general theory of relativity
- (D) special theory of relativity

45. Which of the following is a component of tear gas?

- (A) Ethane
- (B) Methane
- (C) Chloropicrin
- (D) Ether

46. The chemical formula of Plaster of Paris is

- (A) CaSO_4
- (B) $\text{CaSO}_4, 5\text{H}_2\text{O}$
- (C) $(\text{CaSO}_4)_2, 2\text{H}_2\text{O}$
- (D) $2\text{CaSO}_4, \text{H}_2\text{O}$

47. TNT (Trinitrotoluene) is a/an

- (A) pesticide
- (B) insecticide
- (C) explosive
- (D) germicide

- 48.** Isotones have always
- (A) same number of protons
 - (B) same atomic numbers
 - (C) same number of neutrons
 - (D) same number of protons and same number of neutrons
- 49.** Which of the following is an isobaric pair?
- (A) ${}_6\text{C}^{13}, {}_7\text{N}^{13}$
 - (B) ${}_6\text{C}^{13}, {}_7\text{N}^{14}$
 - (C) ${}_7\text{N}^{14}, {}_8\text{O}^{15}$
 - (D) ${}_7\text{N}^{13}, {}_8\text{O}^{15}$
- 50.** An old person is unable to see clearly nearby objects as well as distant objects. To correct the vision, which kind of lens will be required?
- (A) Concave lens
 - (B) Bifocal lens whose upper portion is concave lens and lower portion is convex lens
 - (C) Convex lens
 - (D) Bifocal lens whose upper portion is convex lens and lower position is concave lens
- 51.** The last digit of the number obtained by multiplying the numbers $61 \times 62 \times 63 \times 64 \times 65 \times 66 \times 67 \times 68 \times 69$ will be
- (A) 0
 - (B) 9
 - (C) 7
 - (D) 2
- 52.** Find two natural numbers whose sum is 85 and the Least Common Multiple is 102.
- (A) 30 and 55
 - (B) 35 and 55
 - (C) 17 and 68
 - (D) 51 and 34
- 53.** The average marks obtained by a student in three papers is 52 and in the fourth paper he obtains 60 marks. Find the new average.
- (A) 52
 - (B) 54
 - (C) 55
 - (D) 56
- 54.** If $6x^2 + 6y^2 = 13xy$, what is the ratio of x to y ?
- (A) 2 : 3
 - (B) 3 : 4
 - (C) 4 : 5
 - (D) 1 : 2
- 55.** The ratio between two numbers is 3 : 4 and their LCM is 180. The numbers are
- (A) 45, 60
 - (B) 45, 45
 - (C) 15, 20
 - (D) 45, 20

56. A number is mistakenly divided by 5 instead of being multiplied by 5. Find the percentage change in the result due to his mistake.

- (A) 95%
- (B) 2400%
- (C) 96%
- (D) None of the above

57. $37\frac{1}{2}\%$ of ₹48 is

- (A) ₹20
- (B) ₹16
- (C) ₹18
- (D) None of the above

58. The cost price of 50 mangoes is equal to the selling price of 40 mangoes. Find the percentage profit.

- (A) 20%
- (B) 25%
- (C) 30%
- (D) 50%

59. If three numbers are in the ratio of 1 : 2 : 3 and half of the sum is 18, then the ratio of squares of the numbers is

- (A) 6 : 12 : 13
- (B) 1 : 2 : 4
- (C) 1 : 4 : 9
- (D) 1 : 3 : 4

60. A digital diary is sold for ₹935 at a profit of 10%. What would have been the actual profit or loss on it, if it had been sold for ₹810?

- (A) ₹45 profit
- (B) ₹40 loss
- (C) ₹48 profit
- (D) ₹50 loss

61. ₹1,200 is lent out at 5% per annum simple interest for 3 years. Find the amount after 3 years.

- (A) ₹1,380
- (B) ₹1,290
- (C) ₹1,470
- (D) ₹1,200

62. A can do a work in 10 days and B can do the same work in 20 days. They work together for 5 days and then A goes away. In how many more days will B finish the work?

- (A) 5 days
- (B) 6.5 days
- (C) 10 days
- (D) $8\frac{1}{3}$ days

63. Pipe A and pipe B running together can fill a cistern in 6 minutes. If B takes 5 minutes more than A to fill the cistern, then the time in which A and B will fill the cistern separately will be respectively

- (A) 15 minutes, 20 minutes
- (B) 15 minutes, 10 minutes
- (C) 10 minutes, 15 minutes
- (D) 20 minutes, 20 minutes

64. What is the time taken by Aayan to cover a distance of 360 km by a motorcycle moving at a speed of 10 m/s?

- (A) 10 hours
- (B) 5 hours
- (C) 8 hours
- (D) 6 hours

65. The speed of a boat in still water is 12 km/h and speed of the stream is 2 km/h. A distance of 8 km going upstream is covered in

- (A) 1 hour
- (B) 1 hour 15 minutes
- (C) 45 minutes
- (D) 48 minutes

66. Aayan walks 20 meters towards north. He then turns left and walks 40 metres. He again turns left and walks 20 meters. Further, he moves 20 meters after turning to the right. How far is he from his original position?

- (A) 20 meters
- (B) 30 meters
- (C) 50 meters
- (D) 60 meters

Direction (Q. No. 67 to 70) : Read the following information carefully and answer the questions given below :

P, Q, R, S and *T* are members of the same family. There are two fathers, two sons and two wives, three males and two females in the group. The engineer was the wife of teacher, who was the son of a painter. *T* is neither a male nor the wife of a professional. *R* is the youngest person in the family and *S* is the eldest. *Q* is a male.

67. How is *P* related to *R*?

- (A) Husband
- (B) Wife
- (C) Mother
- (D) Daughter

68. Who is the father of *R*?

- (A) *P*
- (B) *Q*
- (C) *S*
- (D) *T*

69. Whose wife is the engineer?

- (A) *P*
- (B) *Q*
- (C) *R*
- (D) *S*

70. Who are the females in the group?

- (A) *T* and *P*
- (B) *Q* and *P*
- (C) *R* and *Q*
- (D) *T* and *Q*

Direction (Q. No. 71 to 75) : Read the following information carefully and answer the questions given below :

- (i) *A, B, C, D, E, F, G* and *H* are eight friends. Three of them play cricket and table tennis each and two of them play football. Each of them has different height.
- (ii) The tallest does not play football and the shortest does not play cricket.
- (iii) *F* is taller than *A* and *D* but shorter than *H* and *B*. *E* does not play cricket, is taller than *B* and is second to the tallest. *G* is shorter than *D* but taller than *A*.
- (iv) *H*, who is fourth from the top, plays table tennis with *D*.
- (v) *G* does not play either cricket or football. *B* does not play football.

71. Who is the tallest?

- (A) *B*
- (B) *H*
- (C) *C*
- (D) Data inadequate

72. Who is the shortest?

- (A) *G*
- (B) *D*
- (C) *A*
- (D) Data inadequate

73. Which of the following pairs of friends plays football?

- (A) *E F*
- (B) *E A*
- (C) *H F*
- (D) Data inadequate

74. What is *F*'s position from the top when they are arranged in descending order of their heights?

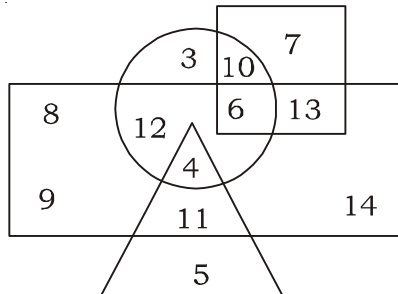
- (A) Fifth
- (B) Fourth
- (C) Sixth
- (D) None of the above

75. Which of the following groups of friends play cricket?

- (A) *CAE*
- (B) *CBF*
- (C) *CBA*
- (D) None of the above

Direction (Q. No. 76 to 80) :

The following questions are based on the diagram given below :



- (i) Rectangle represents males
- (ii) Triangle represents educated
- (iii) Circle represents urban
- (iv) Square represents civil servants

76. Who among the following is an educated male who is **not** an urban resident?

- (A) 4
- (B) 5
- (C) 9
- (D) 11

77. Who among the following is neither a civil servant nor educated, but is urban and **not** a male?

- (A) 2
- (B) 3
- (C) 6
- (D) 10

78. Who among the following is a female, urban resident and also a civil servant?

- (A) 6
- (B) 7
- (C) 10
- (D) 13

79. Who among the following is an educated male who hails from urban area?

- (A) 4
- (B) 2
- (C) 11
- (D) 5

80. Who among the following is uneducated and also an urban male?

- (A) 2
- (B) 3
- (C) 11
- (D) 12

Direction (Q. No. 81 to 85) : Read the following information carefully and answer the questions given below :

Study the pyramid of the letters given below and answer the questions that follow :

```

      B
    M T R
  G C S N P
Y Q H K E A I
J F U W X O V Z D
  
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81. Which letter is missing in the pyramid?

- (A) F
- (B) I
- (C) L
- (D) P

82. If letters were to be studied vertically, which letters would happen to be neighbours that occur together in alphabetical order?

- (A) WX
- (B) PR
- (C) UV
- (D) ST

83. In order to form a word, one of the letters in the pyramid is always followed by one particular letter and the letter is just underneath it. Which of the following is **not** this pair?

- (A) NE
- (B) PA
- (C) ZI
- (D) QU

84. Two letters in the above pyramid have exactly the same number of letters between them horizontally as they have in the alphabetical order. They are

- (A) Y and Q
- (B) V and X
- (C) N and P
- (D) E and K

85. If all horizontal lines were to be studied separately, which neighbours in the alphabetical order are the farthest?

- (A) F and U
- (B) Q and Y
- (C) C and S
- (D) H and Q

- 86.** Forensic Odontology is a branch of forensic science which deals with
- (A) insects
 - (B) bite marks and teeth
 - (C) bone study
 - (D) fingerprints
- 87.** Ethanol is absorbed into blood from
- (A) stomach and small intestine
 - (B) liver and large intestine
 - (C) stomach and large intestine
 - (D) kidney and liver
- 88.** Which one of the following parameters is **not** measured by the lie detector?
- (A) Pulse rate
 - (B) Blood pressure
 - (C) Galvanic skin resistance
 - (D) Adrenaline levels
- 89.** The rough sketch that is usually prepared at a crime scene is used to
- (A) help identify the victim
 - (B) reduce the number of photos
 - (C) locate evidence precisely
 - (D) help visualize the scene
- 90.** Polarising microscope is used to study which of the following?
- (A) Density of soil particles
 - (B) Presence of humus in soil
 - (C) Texture of soil particles
 - (D) Presence of some minerals in soil
- 91.** A normal handwriting in which letters of the word are connected with each other is called as
- (A) graphic writing
 - (B) printed writing
 - (C) cursive writing
 - (D) ambidextrous writing
- 92.** Milk teeth in humans have the formula
- (A) 2.1.0.2
 - (B) 2.0.1.2
 - (C) 2.1.2.0
 - (D) 2.0.2.1
- 93.** What temperature should vaginal swabs collected as evidence in sexual offenses be frozen at, if there is a potential delay in transmitting them to the laboratory?
- (A) Room temperature
 - (B) -10°C
 - (C) -20°C
 - (D) -30°C
- 94.** Why is 5-sulphosalicylic acid included while using protein dyes to enhance blood marks on non-porous surfaces?
- (A) To change the contrast of the blood impression
 - (B) To demonstrate the presence of hemoglobin
 - (C) To make it easier to work with protein dyes
 - (D) To prevent the impressions from defusing

95. In cases where sperm may not be present in a suspected semen stain, which specific antigen is used to confirm the presence of seminal fluid?

- (A) Prostate-Specific Antigen (PSA)
- (B) Hemoglobin A1c (HbA1c)
- (C) Seminal Acid Phosphates (SAP)
- (D) Histo-Semen Group Antigens (HSGAs)

96. Which of the following statements are **correct** with respect to foot-print examination?

- (i) Latent footprints may be present on surfaces of the floor, carpet etc.
 - (ii) Plaster of Paris is the most preferred material to cast the foot impression.
 - (iii) Race of the person can be determined from footprints.
 - (iv) Height of the person can be estimated from the footprints.
- (A) (i), (ii) and (iv) are correct
 - (B) (i), (ii) and (iii) are correct
 - (C) (ii) and (iii) are correct
 - (D) (i), (iii) and (iv) are correct

97. The velocity of bullet of .303 Mark VII cartridge fired from .303-rifle is 2440 ft/sec. and the pitch of rifling is one turn in 10 inches. The rate of spin of the bullet, when it leaves the muzzle, is approximately

- (A) 2560 revolutions per second
- (B) 3360 revolutions per second
- (C) 2930 revolutions per second
- (D) 3930 revolutions per second

98. **Assertion (A)** : Urine stains can be detected by radio immunoassay.

Reason (R) : Urine contains a high molecular weight glycoprotein Tamm-Horsfall Protein (THP).

In the context of two statements, which one of the following is **correct**?

- (A) **Assertion (A)** is correct, but **Reason (R)** is wrong
- (B) **Assertion (A)** is wrong, but **Reason (R)** is correct
- (C) Both **Assertion (A)** and **Reason (R)** are correct
- (D) Both **Assertion (A)** and **Reason (R)** are wrong

99. Write the **correct** sequence for the setup of an HPLC system :

- (a) Solvent reservoir
 - (b) Recorder
 - (c) Pump
 - (d) Guard column
 - (e) Detector
 - (f) Injector
 - (g) Analytical
- (A) (a), (f), (c), (g), (d), (b), (e)
 - (B) (c), (a), (f), (g), (d), (e), (b)
 - (C) (a), (c), (f), (g), (d), (e), (b)
 - (D) (a), (c), (f), (d), (g), (e), (b)

100. Most of the Y chromosome STRs used for forensic cases are

- (A) trimeric repeats
- (B) tetrameric repeats
- (C) pentameric repeats
- (D) hexameric repeats

SPACE FOR ROUGH WORK

★ ★ ★